

55. (new) A deposition method comprising:

at a first temperature, contacting a substrate with a surface activation agent and adsorbing a first layer over the substrate, the first temperature being less than a chemisorption temperature of the surface activation agent on the substrate;

at a second temperature greater than the first temperature, contacting the first layer with a first precursor and chemisorbing a second layer consisting essentially of a monolayer on the first layer, the first layer enhancing a chemisorption rate of the first precursor compared to an otherwise identical substrate without the surface activation agent adsorbed thereon; and

contacting the second layer with a second precursor, chemisorbing a third layer at least one monolayer thick on the second layer, and forming a chemisorption product of the first and second precursors, the chemisorption product consisting essentially of a monolayer of a deposition material.

56. (new) A deposition method comprising:

at a first temperature, contacting a substrate with a surface activation agent and

adsorbing a first layer over the substrate, the first temperature being less than a

chemisorption temperature of the surface activation agent on the substrate;

at a second temperature greater than the first temperature, contacting the first

layer with a first precursor and chemisorbing a second layer consisting essentially of a

monolayer substantially displacing the first layer from over the substrate during the

chemisorbing the second layer, the first layer enhancing a chemisorption rate of the

first precursor compared to an otherwise identical substrate without the surface

activation agent adsorbed thereon; and

contacting the second layer with a second precursor, chemisorbing a third layer

at least one monolayer thick on the second layer; and forming a chemisorption product

of the first and second precursors; the chemisorption product consisting essentially of a

monolayer of a deposition material.

B1
level